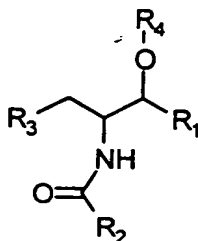


We claim:

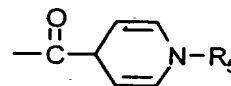
1. A compound selected from the group consisting of the formula:



- where R<sub>1</sub> is an aromatic structure, an alicyclic structure, a branched aliphatic structure or a linear aliphatic group having 5 to 15 carbons; and
- R<sub>2</sub> is an aliphatic chain having 10 to 18 carbons;
- R<sub>3</sub> is a tertiary amine; and
- R<sub>4</sub> is a group that is selectively hydrolyzed in a target cell.

2. The compound of Claim 1 wherein R<sub>3</sub> is pyrrolidino.

3. The compound of Claim 1 wherein R<sub>4</sub> is selected from the group consisting of an acetyl,  $-\text{CO}(\text{CH}_2)_n\text{CH}_3$  wherein n is at least 1 and wherein R<sub>5</sub> is an alkyl group.



4. The compound of Claim 1 wherein R<sub>1</sub> is 4-hydroxyphenyl.

5. The compound of Claim 1 wherein R<sub>1</sub> is 3,4-ethylenedioxy.

6. A method for inhibiting the growth of cancer cells in a mammal comprising the step of administering to the mammal a therapeutically effective amount of a composition comprising the compound of Claim 1 and pharmaceutically acceptable salts thereof.

7. A method for treating a patient having sphingolipidosis by reducing glycosphingolipid synthesis comprising the step of administering to the patient a therapeutically effective amount of a composition comprising the compound of Claim 1 and pharmaceutically acceptable salts thereof.

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8. A method for treating a patient having a microbial or viral infection comprising the step of administering to the patient a therapeutically effective amount of a composition comprising the compound of Claim 1 and pharmaceutically acceptable salts thereof.

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9. A method for treating a patient having a drug resistant tumor, comprising the step of administering to the patient a therapeutically effective amount of a composition comprising the compound of Claim 1 and pharmaceutically acceptable salts thereof.

10. A method for reducing tumor angiogenesis in a patient comprising the step of administering to the patient a therapeutically effective amount of a composition comprising the compound of Claim 1 and pharmaceutically acceptable salts thereof.

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11. A vaccination method comprising the steps of:

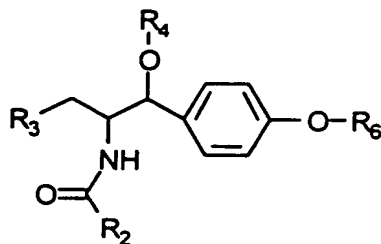
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- a). removing cancer cells sensitive to the compounds below from a patient;
- b). treating the cancer cells *in vitro* with an effective amount of a composition comprising the compound of Claim 1 and pharmaceutically acceptable salts thereof.

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12. A compound selected from the group consisting of the formula:



where  $R_1$  is an aromatic structure, an alicyclic structure, a branched aliphatic structure or a linear aliphatic group having 5 to 15 carbons; and

5  $R_2$  is an aliphatic chain having 10 to 18 carbons;

$R_3$  is a tertiary amine;

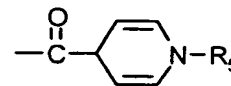
$R_4$  is a group that is selectively hydrolyzed in a target cell or a hydrogen; and

$R_6$  is a group that is selectively hydrolyzed in a target cell.

10 13. The compound of Claim 12 wherein  $R_3$  is pyrrolidino.

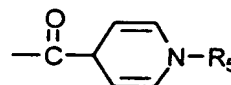
14. The compound of Claim 12 wherein  $R_4$  is selected from the group

consisting of an acetyl,  $-\text{CO}(\text{CH}_2)_n\text{CH}_3$  wherein  $n$  is at least 1 and wherein  $R_5$  is an alkyl group.



15. The compound of Claim 12 wherein  $R_6$  is selected from the group

consisting of an acetyl,  $-\text{CO}(\text{CH}_2)_n\text{CH}_3$  wherein  $n$  is at least 1 and wherein  $R_5$  is an alkyl group.



20 16. The compound of Claim 12 wherein  $R_1$  is 4-hydroxyphenyl.

17. The compound of Claim 12 wherein  $R_1$  is 3,4-ethylenedioxy.

18. A method for inhibiting the growth of cancer cells in a mammal comprising the step of administering to the mammal a therapeutically effective amount of a composition comprising the compound of Claim 12 and pharmaceutically acceptable salts thereof.

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19. A method for treating a patient having sphingolipidosis by reducing glycosphingolipid synthesis comprising the step of administering to the patient a therapeutically effective amount of a composition comprising the compound of Claim 12 and pharmaceutically acceptable salts thereof.

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20. A method for treating a patient having a microbial or viral infection comprising the step of administering to the patient a therapeutically effective amount of a composition comprising the compound of Claim 12 and pharmaceutically acceptable salts thereof.

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21. A method for treating a patient having a drug resistant tumor, comprising the step of administering to the patient a therapeutically effective amount of a composition comprising the compound of Claim 12 and pharmaceutically acceptable salts thereof.

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22. A method for reducing tumor angiogenesis in a patient comprising the step of administering to the patient a therapeutically effective amount of a composition comprising the compound of Claim 12 and pharmaceutically acceptable salts thereof.

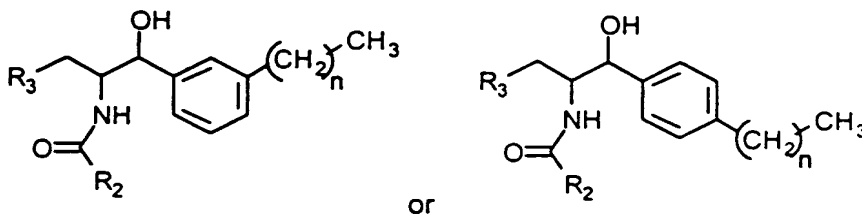
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23. A vaccination method comprising the steps of:

- a). removing cancer cells sensitive to the compounds below from a patient;
- b). treating the cancer cells *in vitro* with an effective amount of a composition

30 comprising the compound of Claim 12 and pharmaceutically acceptable salts thereof.

24. A compound selected from the group consisting of the formulas:



where  $R_2$  is an aliphatic chain having 10 to 18 carbons; and

$R_3$  is a tertiary amine.

5

25. The compound of Claim 24 wherein  $R_3$  is pyrrolidino.

26. A method for inhibiting the growth of cancer cells in a mammal comprising the step of administering to the mammal a therapeutically effective amount of a composition comprising the compound of Claim 24 and pharmaceutically acceptable salts thereof.

27. A method for treating a patient having sphingolipidosis by reducing glycosphingolipid synthesis comprising the step of administering to the patient a therapeutically effective amount of a composition comprising the compound of Claim 24 and pharmaceutically acceptable salts thereof.

28. A method for treating a patient having a microbial or viral infection comprising the step of administering to the patient a therapeutically effective amount of a composition comprising the compound of Claim 24 and pharmaceutically acceptable salts thereof.

29. A method for treating a patient having a drug resistant tumor, comprising the step of administering to the patient a therapeutically effective amount of a composition comprising the compound of Claim 24 and pharmaceutically acceptable salts thereof.

30. A method for reducing tumor angiogenesis in a patient comprising the step of administering to the patient a therapeutically effective amount of a composition comprising the compound of Claim 24 and pharmaceutically acceptable salts thereof.

31. A vaccination method comprising the steps of:

- a). removing cancer cells sensitive to the compounds below from a patient;
- b). treating the cancer cells *in vitro* with an effective amount of a composition

comprising the compound of Claim 24 and pharmaceutically acceptable salts thereof.

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